CLAIMS

What is claimed is:

1   1.   A method of automatically capturing data for trend analysis comprising

2   the steps of:

3   receiving a query for data from a database application;

4   issuing the received query to a database management system;

5   receiving a response to the query from the database management system,

6   the response indicating a result dataset;

7   creating or updating a database table that is suitable for trend analysis,;

8   and

9   populating or updating the database table with data from the result dataset.

1   2.   The method of claim 1, wherein the creating step comprises the steps of:

2   analyzing a format of the result dataset; and

3   creating the database table based on the format of the result dataset or

4   updating an existing database table based on the format of the result dataset.

1   3.   The method of claim 2, wherein the populating or updating step comprises

2   the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   4.   The method of claim 2, wherein the response indicating the result dataset

2   indicates a result data table and the populating or updating step further comprises

3   the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   5.   The method of claim 2, wherein the response indicating the result dataset

2   indicates a result data table and the populating or updating step comprises the

3   steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1   6.   The method of claim 1, further comprising the step of determining

2   whether the result dataset is to be captured for trend analysis; and wherein the

3   creating or updating step comprises the step of creating or updating a database

4   table that is suitable for trend analysis, if the result dataset is to be captured for

5   trend analysis.

1   7.   The method of claim 6, wherein the creating or updating step comprises

2   the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5   updating an existing database table based on the format of the result dataset.

1   8.   The method of claim 7, wherein the populating or updating step comprises

2   the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   9.   The method of claim 7, wherein the response indicating the result dataset

2   indicates a result data table and the populating or updating step comprises the

3   step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   10.   The method of claim 7, wherein the response indicating the result dataset

2   indicates a result data table and the populating or updating step comprises the

3   steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1   11.   A database connectivity layer comprising:

2   a database connectivity layer component operable to provide an interface

3   between a database application and a database; and

4   a cover layer between the database connectivity layer component and the

5   database application operable to capture and implement invocations by the

6   database application of functions included in database connectivity layer

7   component that may involve trend analysis, but pass through to the database

8   connectivity layer component invocations by the database application of

9   functions that do not involve trend analysis.

1   12.   The database connectivity layer of claim 11, wherein the cover layer is

2   further operable to perform the steps of:

3   receiving a query for data from a database application;

4   issuing the received query to a database management system;

5   receiving a response to the query from the database management system,

6   the response indicating a result dataset;

7   determining whether the result dataset is to be captured for trend analysis;

8   and

9   if the result dataset is to be captured for trend analysis:

10   creating or updating a database table that is suitable for trend

11   analysis, and

12   populating or updating the database table with data from the result

13   dataset.

1   13.   The database connectivity layer of claim 12, wherein the creating step

2   comprises the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5   updating an existing database table based on the format of the result dataset.

1   14.   The database connectivity layer of claim 13, wherein the populating or

2   updating step comprises the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   15.   The database connectivity layer of claim 13, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   16.   The database connectivity layer of claim 13, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1   17.   A trendable database connectivity layer operable to perform the steps of:

2   receiving a query for data from a database application;

3   issuing the received query to a database management system;

4   receiving a response to the query from the database management system,

5   the response indicating a result dataset;

6   creating or updating a database table that is suitable for trend analysis; and

7   populating or updating the database table with data from the result dataset.

1   18.   The trendable database connectivity layer of claim 17, wherein the

2   creating step comprises the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5   updating an existing database table based on the format of the result dataset.

1   19.   The trendable database connectivity layer of claim 18, wherein the

2   populating or updating step comprises the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   20.   The trendable database connectivity layer of claim 18, wherein the

2   response indicating the result dataset indicates a result data table and the

3   populating or updating step comprises the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   21.   The trendable database connectivity layer of claim 18, wherein the

2   response indicating the result dataset indicates a result data table and the

3   populating or updating step comprises the steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1 22. A database management system comprising:

2   a database operable to store and retrieve data;

3   a database application operable to utilize the database; and

4   a database connectivity layer operable to provide an interface between the

5 database application and the database, wherein the database connectivity layer

6 comprises:

7   a database connectivity layer component operable to provide an

8   interface between a database application and a database; and

9   a cover layer between the database connectivity layer component

10   and the database application operable to capture and implement

11   invocations by the database application of functions included in database

12   connectivity layer component that may involve trend analysis, but pass

13   through to the database connectivity layer component invocations by the

14   database application of functions that do not involve trend analysis.

1 23. The database management system of claim 22, wherein the cover layer is

2 further operable to perform the steps of:

3   receiving a query for data from a database application;

4   issuing the received query to a database management system;

-32-

5   receiving a response to the query from the database management system,

6   the response indicating a result dataset;

7   determining whether the result dataset is to be captured for trend analysis;

8   creating or updating a database table that is suitable for trend analysis; and

9   populating or updating the database table with data from the result dataset.

1   24.   The database management system of claim 23, wherein the creating step

2   comprises the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5   updating an existing database table based on the format of the result dataset.

1   25.   The database management system of claim 24, wherein the populating or

2   updating step comprises the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   26.   The database management system of claim 24, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   27.   The database management system of claim 24, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1   28.   A database management system comprising:

2   a database operable to store and retrieve data;

3   a database application operable to utilize the database; and

4   a trendable database connectivity layer operable to perform the steps of:

5   receiving a query for data from a database application;

6   issuing the received query to a database management system;

7   receiving a response to the query from the database management

8   system, the response indicating a result dataset;

9   creating or updating a database table that is suitable for trend analysis; and

10   populating or updating the database table with data from the result dataset.

1 29. The database management system of claim 28, wherein the creating step

2 comprises the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5 updating an existing database table based on the format of the result dataset.

1 30. The database management system of claim 29, wherein the populating or

2 updating step comprises the step of:

3   populating or updating the database table with data from the result dataset

4 and with timestamp information.

1 31. The database management system of claim 29, wherein the response

2 indicating the result dataset indicates a result data table and the populating or

3 updating step comprises the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   32.   The database management system of claim 29, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1   33.   A computer program product for automatically capturing data for trend

2   analysis in an electronic data processing system, comprising:

3   a computer readable medium;

4   computer program instructions, recorded on the computer readable

5   medium, executable by a processor, for performing the steps of

6   receiving a query for data from a database application;

7   issuing the received query to a database management system;

8   receiving a response to the query from the database management system,

9   the response indicating a result dataset;

10   creating or updating a database table that is suitable for trend analysis, if

11   the database table does not already exist; and

12   populating or updating the database table with data from the result dataset.

1   34.   The computer program product of claim 33, wherein the creating step

2   comprises the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5   updating an existing database table based on the format of the result dataset.

1   35.   The computer program product of claim 34, wherein the populating or

2   updating step comprises the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   36.   The computer program product of claim 34, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   37.   The computer program product of claim 34, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step comprises the steps of:

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.

1   38.   The computer program product of claim 33, further comprising the step of

2   determining whether the result dataset is to be captured for trend analysis; and

3   wherein the creating or updating step comprises the step of creating or updating a

4   database table that is suitable for trend analysis, if the result dataset is to be

5   captured for trend analysis.

-38-

1   39.   The   computer program product of claim 38, wherein the creating or

2   updating step comprises the steps of:

3   analyzing a format of the result dataset; and

4   creating the database table based on the format of the result dataset or

5   updating an existing database table based on the format of the result dataset.

1   40.   The computer program product of claim 39, wherein the populating or

2   updating step comprises the step of:

3   populating or updating the database table with data from the result dataset

4   and with timestamp information.

1   41.   The   computer program product of claim 39, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step further comprises the step of:

4   for each row of data in the result data table, populating or updating a row

5   in the database table with the row of data and with timestamp information.

1   42.   The   computer program product of claim 39, wherein the response

2   indicating the result dataset indicates a result data table and the populating or

3   updating step further comprises the steps of:

-39-

4   determining whether the result data table includes all rows of data in the

5   result dataset;

6   retrieving all rows in the result dataset, if the result data table does not

7   include all rows in the result dataset; and

8   for each row of data in the result data set, populating or updating a row in

9   the database table with the row of data and with timestamp information.